

REMARKS/ARGUMENTS

Favorable reconsideration of this application is requested in view of the amendments above and the remarks which follow.

Disposition of Claims

Claims 1-6 are pending in this application. Claims 7-10 have been cancelled in view of a restriction requirement.

Rejections under 35 U.S.C. §103

Claims 1-6 were rejected under 35 U.S.C. §103(a) as being obvious over Takashi et al. (U.S. Patent No. 6,313,947) in view of Applicant's Admitted Art. In particular, the Examiner states that Takahashi et al. disclose an initial glass batch containing copper halides, which is melted and cooled to produce a glass article and subsequently reheated to develop copper halide crystals. The Examiner admits that Takashi et al. do not disclose an ion-exchanging step. The Examiner asserts that as admitted by Applicant ion-exchange has been used to strengthen glass articles, and it would be obvious to one of ordinary skill in the art to have incorporated an ion-exchange step at some point in the process of Takashi et al. in order to enhance the mechanical strength of the glass article.

Claim 1 has been amended as set forth above to particularly point out what the Applicant regards as the invention. Amended claim 1 recites a method of manufacturing a polarizing glass article comprising the steps of melting a glass batch in which a metal that forms a polarizing layer of the glass article is essentially omitted, the metal being selected from the group consisting of silver and copper, the glass batch containing a halide capable of precipitating silver or copper halide. The method further includes cooling and shaping the melt into a glass article and ion-exchanging silver or copper metal into the surface of the glass article. The claim recites other limitations. Support for the limitation "melting a glass batch in which a metal that forms a polarizing layer of the glass article is essential omitted, the metal being selected from the group consisting of silver and copper," can be found throughout the disclosure. See, for example, numbered paragraph 12 of the specification as originally filed.

Amended claim 1 recites that a metal that forms a polarizing layer of the glass article, such as silver or copper, is essentially omitted. The ion-exchange step is needed and used to introduce the metal into the glass article so that the glass article can be subjected “to an elevated temperature for a period of time sufficient to generate and precipitate silver or copper halide crystals in a surface layer of the glass.” The advantages of essentially omitting copper or silver from the glass batch and later introducing copper or silver into a glass article formed from the glass batch are discussed in the disclosure. See, for example, numbered paragraph 12 of the specification as originally filed.

The initial glass batch disclosed in Takahashi et al. contains copper in the form of copper oxide and copper halide. The Takahashi et al. patent states that “[i]n this invention, glasses containing copper and halogen containing constituents and at least one reductant element are used as starting materials” (column 4, lines 31-34). The glass batch is melted, and the resulting melt is cooled to room temperature to produce a glass containing copper and halogen (col. 4, line 67 – col. 5, line 2). This glass is then reheated to develop copper halide particles. The Examiner suggests that an ion-exchange step could be incorporated in the Takahashi et al. method to improve the strength of the glass. However, this additional ion-exchange step would not eliminate the requirement in the Takahashi et al. patent that the initial glass batch contains copper.

From the foregoing, Takahashi et al. do not teach the following limitation of claim 1: “melting a glass batch in which a metal that forms a polarizing layer of the glass article is essentially omitted, the metal being selected from the group consisting of silver and copper.” Applicant’s Admitted Art also fails to overcome the deficiency in Takahashi et al. Therefore, claim 1 as amended is not obvious over Takahashi et al. in view of Applicant’s Admitted Art. Withdrawal of the rejection of claim 1 is respectfully requested. Claims 2-6 being dependent on claim 1 are likewise patentable in view of the foregoing arguments.

Conclusion

The rejected claims have been amended and/or shown to be allowable over the prior art. Applicant believes that this paper is fully responsive to each ground of rejection cited by the

Examiner in the Office Action dated April 12, 2005, and respectfully requests that a timely Notice of Allowance be issued in this case.

Please apply any charges not covered or credits in connection with this filing to Deposit Account No. 03-3325 (ref. SP02-014).

Respectfully submitted,

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Adenike Adebisi

Adenike A. Adebisi

Reg. No. 42,254

Tel.: (281) 440-1712